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ABSTRACT

This document presents research intended to help teachers and administrators improve the quality of instruction. Topics include: (1) classroom (e.g., teachers carefully orient students to lessons, teachers provide clear and focused instruction, teachers routinely provide students feedback and reinforcement regarding their learning progress, teachers review and reteach as necessary to help all students master learning materials, teachers use validated strategies to develop students' critical and creative thinking skills, and teachers foster the development of self-directed learning skills); (2) school (leaders undertake school restructuring efforts as needed to attain agreed upon goals for students, strong leadership guides the instructional program, administrators and other leaders continually strive to improve instructional effectiveness, and administrators and other leaders engage staff in professional development and collegial learning activities); and (3) district (district leaders and staff encourage, support, and monitor school improvement efforts). Each of the three sections provides a listing of key references. (Contains approximately 370 bibliographic references.) (SM)

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THE Northwest Regional Educational Laboratory

PROGRAM REPORT

RESEARCH YOU CAN USE TO IMPROVE RESULTS
UPDATE OF SECTION 3

Task 2 – OERI Event No. 1
Deliverable 16212

June 29, 2001

J.D. Kirkpatrick

Prepared by
Kathleen Cotton

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Research You Can Use to Improve Results
Update of Section 3

Kathleen Cotton
June 2001

3.0 INSTRUCTION AND INSTRUCTIONAL IMPROVEMENT

3.1 Classroom

3.1.1 Teachers Carefully Orient Students to Lessons

Teachers:

a. Help students get ready to learn by directing their attention to key elements of the upcoming lesson.
b. Explain lesson objectives in simple, everyday language and refer to them throughout lessons to maintain focus.
c. Post or hand out learning objectives to help students keep a sense of direction and check periodically to assure that objectives are understood.
d. Explain the relationship of a current lesson to previous study, calling attention to key concepts or skills previously covered.
e. Arouse students' interest and curiosity about the lesson content by relating it to things of personal relevance to them.
f. Pose questions that will train students' attention on relevant information in the lesson.
g. Challenge and inspire students to learn, particularly at the start of difficult lessons. They make certain that students know in advance what is expected and are ready to learn.
h. Use techniques such as advance organizers, study questions, prediction, concept mapping and computer simulations, to prepare students for learning activities.
i. Make students aware that they are expected to contribute to classroom discussions and other participatory activities.

Key references Block and Burns (1976); Bloom (1976); Brophy (1987, 2000); Brophy and Good (1986); Cavalier and Klein (1998); Corder (1999); Ellis and Worthington (1994); Evertson (1986, 1995); Gersten and Carnine (1986); Good (1984); Good and Grouws (1979a,b); Heistad (1999); Kooy (1992); Lumpkins, Parker, and Hall (1991); McGinley and Denner (1985); Mitchell (1987);Molina, ET AL. (1997); Pressley, et al. (1997); Porter and Brophy (1988); Rosenshine (1976, 1983); Rosenshine and Stevens (1986); Slavin (1994a); Snapp and Glover (1990); Stahl and Clark (1987); Stallings (1985c); Streeter (1986); Tomic (1989); Weade and Evertson (1988) Wolfe (1998)

3.1.2 Teachers Provide Clear and Focused Instruction

Teachers:

a. Review lesson activities, give clear written and verbal directions, emphasize key points and instructions, and check students' understanding.
b. Give lectures and demonstrations in a clear and focused manner.
c. Take note of learning style differences among students and, when feasible, identify and use learning strategies and materials that are appropriate to different styles.
d. Give students plenty of opportunity for guided and independent practice with new concepts and skills, including hands-on learning activities
e. Provide instruction in strategies for learning and remembering/applying what they have learned, as well as instruction in test-taking skills.
f. Use validated strategies to develop students' higher-level thinking skills.
g. Select problems and other academic tasks that are well matched to lesson content so student success rate is high. They also provide varied and challenging seatwork activities.
h. Provide computer-assisted instructional activities which supplement and are integrated with teacher-directed learning.

Key references

Akpan and Andre (1999); Bain, Lintz, and Word (1989); Behets (1997); Beidel, Turner, and Taylor-Ferreira (1999); Bennett (1991); Brophy (1979); Brophy and Good (1986); Cawelti (1999); Chilcoat (1989); Chin and Brown (2000); Corno and Snow (1986); Crawford, et al. (1975); Dunn (1984); Ellis and Worthington (1994); Evertson (1989); Fraenkel (1995); Gall, et al. (1990); Gersten, et al. (1984); Gersten and Carnine (1986); Geiser (1999); Gleason, Carnine, and Boriero (1990); Good and Grouws (1977, 1979a,b); Haller, Child, and Walberg (1988); Heistad (1999); Kulik and Kulik (1987); Kushman (1997); Levine (1982); Levine and Stark (1982); Madden, et al. (1993); Medley (1979); Metcalf (1992); Metcalf and Cruickshank (1991); Mevarech and Rich (1985); Naffziger, Steele, and Varner (1998) Nickerson (1988); Okey (1985); Paradise and Block (1984); Paris, Oka, and DeBritto (1983); Porter and Brophy (1988); Rosenshine (1979, 1983); Rosenshine and Stevens (1986); Rutter, et al. (1979); Samson (1985); Saracho (1984); Scruggs, White, and Bennion (1986); Sidelinger (1997); Slavin (1994a); Snyder, et al. (1991); Stallings (1985a); Stennett (1985); Wang, Haertel, and Walberg (1993-94); Waxman, et al. (1985); Weade and Evertson (1988); Weinstein and Meyer (1986); Weinstein, et al. (1988-89); Woodward, Carnine, and Gersten (1988)

3.1.3 Teachers Routinely Provide Students Feedback and Reinforcement Regarding their Learning Progress

Teachers:

a. Give students immediate feedback on their in-class responses and written assignments to help them understand and correct errors; the primary purpose is to inform rather than evaluate.
b. Acknowledge correct responses and indicate that incorrect ones are incorrect during recitations and on assignments and tests. They do not overcorrect, knowing that students will be reluctant to respond if corrected constantly.
c. Relate the specific feedback they give to unit goals or overall course goals.
d. Give praise and other verbal reinforcements for correct answers and for progress in relation to past performance; however, teachers use praise sparingly and avoid the use of unmerited or random praise.
e. Make use of peer evaluation techniques (e.g., in written composition) as a means of providing feedback and guidance to students.
f. Provide computer-assisted instructional activities that give students immediate feedback regarding their learning performance.
g. Assign homework regularly to students in grade four and above, and see that it is corrected and returned promptly—either in class by the students or by the teacher.
h. Use peer tutoring strategies that include training students to provide each other feedback and reinforcement.

Key references Brophy (1980, 1987); Brophy and Good (1986); Broughton (1978); Cannella (1986); Cohen, Kulik, and Kulik (1982); Colvin (2000); DiPardo and Freedman (1988); Duke and Henniger (1998); Fuchs, et al. (1996); Fuchs, Fuchs and Kazdan (1999); Gardner (1998); Gettinger (1983); Gorrell and Keel (1986); Gottfried and Gottfried (1991); Hawkins, Doueck, and Lishner (1988); Hawley, et al. (1984); Hano (1999); Kastra, Tollefson, and Gilbert (1987); Kearns (1988); Kohn (1994); Kulik and Kulik (1987, 1988); Lalley (1998); Lysakowski and Walberg (1981); Madden, et al. (1993); McCarthy, Webb, and Hancock (1995); Mortimore, et al. (1988); Mortweet, et al. (1999); Page (1992); Porter and Brophy (1988); Rosenshine and Stevens (1986); Rupe (1986); Sammons, Hillman, and Mortimore (1995); Schunk (1983, 1984a,b); Schunk and Swartz (1993); Slavin (1979a,b); Stennett (1985); Stevens (1985); Teddlie, Kirby, and Stringfield (1989); Tenenbaum and Goldring (1989)

3.1.4 Teachers Review and Reteach as Necessary to Help All Students Master Learning Material

Teachers:

a. Introduce new learning material as quickly as possible at the beginning of the year or course, with a minimum of review or reteaching of previous content. They review key concepts and skills thoroughly but quickly.
b. Use different materials and examples for reteaching than those used for initial instruction; reteaching is more than a "rehash" of previously taught lessons.
c. Use engaging materials for remediation, such as "talking software" and reading content appropriate to students' age/grade level.
d. Reteach priority lesson content until students show they have learned it.
e. Provide regular, focused reviews of key concepts and skills throughout the year to check on and strengthen student understanding.
f. Select computer-assisted instructional activities that include review and reinforcement components.
g. Address learning style differences during review and reteaching.
h. Seek, evaluate, and use resources intended specifically for review/reteaching of key lessons (e.g., in mathematics).

Key references Bain, Lintz, and Word (1989); Block (1983); Block and Burns (1976); Block, Efthim, and Burns (1989); Bloom (1976); Brophy (1986b, 1987, 1988b); Brophy and Good (1986); Burns (1979); Clark and Nelson (1993); Colvin (2000); Dalton and Hannafin (1988); Darter and Phelps (1990); Dewalt and Rodwell (1988); Dillashaw and Okey (1983); Gillingham and Guthrie (1987); Good (1984); Guskey and Gates (1986); Johnson, Gersten, and Carnine (1987); Kinzie, Sullivan, and Berdel (1988); Rosenshine (1976, 1979, 1983); Rosenshine and Stevens (1986); Slate, Algozzine, and Lockavitch (1998); Wolf and Supon (1994)

3.1.5 Teachers Use Validated Strategies to Develop Students' Critical and Creative Thinking Skills

Teachers:

a. Help students to understand that critical and creative thinking are important for success in our rapidly changing world.
b. Provide instruction in study skills, such as paraphrasing, outlining, guided note-taking; developing cognitive maps, and using advance organizers.
c. Teach strategies for problem solving, decisionmaking, exploration, classification, and hypothesizing, and provide students opportunities to practice and refine these skills.
d. Provide real-world, hands-on activities whereby students learn and apply critical and creative thinking skills.

e. Work with older students to develop metacognitive skills, so that they can examine their own thinking patterns and learning processes and learn to make changes as needed.
f. Ask higher-order questions and give students generous amounts of time to respond.
g. Use instructional strategies such as probing, redirection, and reinforcement to improve the quality of student responses.
h. Incorporate computer-assisted instructional activities, including educational web sites, into building thinking skills such as verbal analogy, logical reasoning, induction/deduction, elaboration, and integration.
i. Provide scientific inquiry and creative problem-solving activities that engage students in framing and posing questions and finding answers through investigation.
j. Maintain a supportive classroom environment in which students feel safe experimenting with new ideas and approaches.
k. Provide activities whereby secondary students learn to confront and analyze their own assumptions and biases.
l. May use specific thinking skill development programs and/or infuse thinking skill instruction into content-area lessons, since both approaches have been shown to be effective.

Key references Bangert-Drowns and Bankert (1990); Barba and Merchant (1990); Baum (1990); Bransford, et al. (1986); Brophy (2000); Casey, et al. (1995); Chang and Barufaldi (1997); Chang, Lin, and Chen (1998); Chang and Mao (1998, 1999); Chin and Brown (2000); Crump, Schlichter, and Palk (1988); Fields (1995); Fluellen (1999); Freseman (1990); Gall, et al. (1990); Haller, Child, and Walberg (1988); Hansler (1985); Herrnstein, et al. (1986); Hoek, van den Eeden, and Terwel (1997); Horton and Ryba (1986); Huber, Smith and Shotsberger (2000);Hudgins and Edelman (1986); Kagan (1988); Levine and Ornstein (1993); Lindmark, et al. (1996); Lucangeli, Galderisi, and Cornoldi (1995); Maqsud (1998); Matthews (1989); Mid-continent Regional Educational Laboratory (1985); Molina, et al. (1997); Norris (1985); Obach and Moely (1993); Pearson (1982); Pogrow (1988); Reis, Gentry and Park (1995); Riding and Powell (1986, 1987); Ristow (1988); Robinson (1987); Rodd (1999); Sarapuu and Adojaan (1999); Snapp and Glover (1990);Shayer (1997); Sheldon (1999); Sternberg and Bhana (1986); Sternberg, Torff and Grigorenko (1998); Sweeney, et al. (1999); Tenenbaum (1986); Williamson and Smoak (1999); Wong (1985)

3.1.6 Teachers Use Effective Questioning Techniques to Build Basic and Higher-Level Skills

Teachers:
a. Make use of classroom questioning to engage student interaction and to monitor student understanding.
b. Structure questions so as to focus students' attention on key elements in the lesson.

c. Pose questions at the beginning of lessons or reading activities for students to consider as they read or listen to new material.
d. Pose questions to both volunteering and nonvolunteering students.
e. Ask a combination of lower-cognitive (fact and recall) and higher-cognitive (open-ended and interpretive) questions to check students' understanding and stimulate their thinking during classroom recitations.
f. Ask lower-cognitive questions that most students will be able to answer correctly when helping students to acquire factual knowledge.
g. Ask a majority of higher-cognitive questions (50 percent or more) of students above the primary grades during classroom recitations.
h. Allow generous amounts of "wait-time" when questioning students—at least three seconds for lower-cognitive questions and more for higher-cognitive ones.
i. Continue to interact with students whose initial responses are inaccurate or incomplete, probing their understanding and helping them to produce more thoughtful answers.
j. Make certain that both faster and slower learners have opportunities to respond to higher cognitive questions and are given sufficient wait-time.
k. Avoid asking vague questions, trick questions, and questions too abstract for the developmental level of the students.

Key references Atwood and Wilen (1991); Ayaduray and Jacobs (1997); Barnette, et al. (1995); Brophy (1986b, 1987, 2000); Brophy and Good (1986); Brualdi (1998); Carr (1998); Chin and Brown (2000); Ciardiello (1986); Cotton (1989a); Ellis (1993); Gall (1984); Good (1984); Honea (1982); Hoxmeier (1986); Johnston, Markle, and Haley-Oliphant (1987); Koufetta-Menicou and Scaife (2000); Makin (1996); Mansfield (1996); Osman and Hannafin (1994); Redfield and Rousseau (1981); Riley (1986); Samson, et al. (1987); Slavin (1994a); Stevens (1985); Swift and Gooding (1983); Swift, Swift, and Gooding (1984); Tobin and Capie (1980, 1981); van Zee and Minstrell (1997);Winne (1979); Yei, Wang, and Huang (1998)

3.1.7 Teachers Foster the Development of Self-Directed Learning Skills

Teachers:

a. Provide, for elementary students, age-appropriate experience of self-direction by offering a range of choices of learning activities and materials.
b. Help students to understand that developing the ability to learn independently will increase the likelihood that they will be successful in school and in the workplace.
c. Help students to develop critical thinking and other higher-order skills, as detai' d above.
d. Involve students in hands-on projects of personal relevance to them that provide practice in applying what they have learned.
e. Assume, with older students, the roles of guide, facilitator, and resource person in project-based learning activities that are primarily controlled by the students.

f. Expect some initial apprehension from students who are unaccustomed to assuming responsibility for their own learning, and assure them that guidance will be available to them throughout the process.
g. Teach the steps of self-directed learning and give students examples of—and practice in—writing goals and objectives and designing learning plans.
h. Provide instruction in Internet search skills and in the ways library and database information is organized, and offer learning experiences in accessing, managing, and utilizing information.

Key references: Butler (1997); Caissy (1986); Carr (1991); Cotton (1998); Davalos and Haensly (1997); Dickinson (1995); Hancock (1993); Karp (1991); Katz (1998); Knowles (1990); Kopacsi and Hochwald (1998); Obach and Moely (1993); Paterson (1996); Pierce (1998); Pintrich and DeGroot (1990); Ridley, McCombs, and Taylor (1994); Rosenshine (1996); Stiller and Ryan (1992); Thomas, Strage, and Curley (1988); Williams (1992); Woodle, Hartsoe, and Taylor (1995); Woolnough, McLaughlin, and Jackson (1999); Yamazon (1999)

3.2 School

3.2.1 Leaders Undertake School Restructuring Efforts as Needed to Attain Agreed-Upon Goals for Students

Administrators and other leaders:

a. Redevelop curriculum, instruction, student assessment, and teacher evaluation as needed to align with state standards
b. Review school operations in light of agreed-upon goals for student performance.
c. Work with school-based management team members to identify any needed changes (in organization, curriculum, instruction, scheduling, etc.) to support attainment of goals for students.
d. Analyze data on student performance and use findings to inform improvement decisions.
e. Identify the kinds of staff development needed to enable school leaders and other personnel to bring about desired changes.
f. Study restructuring efforts conducted elsewhere for ideas and approaches to use or adapt. They pay particular attention to kinds of structural changes that have met with considerable success in improving student performance: multi-age grouping, block scheduling, team teaching, looping, class size reduction, detracking, responsive professional development programs, and school-based decision making.
g. Focus efforts on factors identified by research as critical to successful restructuring: results orientation, high standards, effective teaching practices, parent involvement, professional development, and use of technology.
h. Consider school contextual factors when undertaking restructuring efforts —factors such as availability of resources, nature of incentives and disincentives, linkages within

the school, school goals and priorities, factions and stresses among the staff, current instructional practices, and legacy of previous innovations.

i. Involve staff, parents, community members, and students in providing input and making decisions.

j. Pursue both breadth and depth in the implementation of agreed-upon changes; changes are schoolwide and fundamentally alter the way schooling is carried out.

Key references Cawelti (1997); Education Commission of the States (1995); Education Trust (1999); Fortune, Williams, and White (1992); Fouts (1999); Fullan (1993); George, Grissom, and Just (1996); Johnson (1997); Kentucky SDE (2000); Lee and Smith (1993, 1995, 1996); Leithwood (1994); Lewis (1989); Lewis, Williams, and Cassidy (1998); McCarthy and Still (1993); McPartland, et al. (1998); Murphy and Hallinger (1993); Newmann, King, and Rigdon (1997); Prestine (1993); Prestine and Bowen (1993); Reed (1998); Smith and Lee (1996); Wohlstetter and Mohrman (1996)

3.2.2 Strong Leadership Guides the Instructional Program

Administrators and other instructional leaders:

a. Believe that all students can learn and that the school makes the difference between success and failure.

b. Emphasize learning as the most important reason for being in school; public speeches and writings emphasize the importance and value of high achievement.

c. Have a clear understanding of the school's mission and are able to state it in direct, concrete terms. They establish an instructional focus that unifies staff.

d. Seek, recruit, and hire staff members who will support the school's mission and contribute to its effectiveness.

e. Foster capacity development and high levels of personal commitment to school goals on the part of school staff.

f. Know and can apply validated teaching and learning principles; they model effective teaching practices for staff as appropriate.

g. Know educational research, emphasize its importance, share it, and foster its use in problem solving.

h. Foster and facilitate discussion of instructional issues among staff.

i. Seek out innovative curricular programs, observe these, acquaint staff with them, and participate with staff in discussions about adopting or adapting them.

j. Set expectations for curriculum quality through the use of standards and guidelines. They periodically check the alignment of curriculum with instruction and assessment, establish curricular priorities, and monitor the implementation of curriculum.

k. Check student progress fr quently, relying on explicit performance data. They make results public, and work with staff to set standards, use them as points of comparison, and address discrepancies.

l. Expect all staff to meet high instructional standards. They secure staff agreement on a schoolwide instructional model, make classroom visits to observe instruction, focus supervision activities on instructional improvement, and provide and monitor staff development activities.
m. Identify and secure resources—financial, human, time, materials, and facilities—for professional development.
n. Provide professional development activities that are congruent with educational research and responsive to staff's stated needs.
o. Extend considerable autonomy to teachers and encourage them to innovate.
p. Communicate the expectation that instructional programs will improve over time. They provide well-organized, systematic improvement strategies; give improvement activities high priority and visibility; and monitor implementation of new practices.
q. Involve the full staff in planning implementation strategies. They set and enforce expectations for participation, ensure that others follow through on commitments, and rally support from the different constituencies in the school community.
r. Model the beliefs and behaviors they seek to instill in others.

Key references Andrews and Soder (1987); Bamburg and Andrews (1991); Beck and Murphy (1996); Berman and McLaughlin (1979); Biester, et al. (1984); Bossert (1988b); Brookover (1979, 1981); Brookover and Lezotte (1979); Brundage (1979); Cawelti (1987, 1997); Cohen (1994); Cohen, et al. (1989); Corbett, Dawson, and Firestone (1984) Connell (1999); Crisci, et al. (1988); Crone and Teddlie (1995); DeBevoise (1984); Druian and Butler (1987); Eberts and Stone (1988); Edmonds (1979a); Emrick (1977); Everson, et al. (1986); Fullan (1993); Gaziel (1995); George, Grissom, and Just (1996); Glasman (1984); Good and Brophy (1986); Gullatt and Lofton (1996); Gurr (1997); Hallinger, Bickman, and Davis (1989); Hallinger and Heck (1996); Hawley, et al. (1984); Heck (1992); Hess (1999); High and Achilles (1986); Hoy, Hannum, and Tschannen-Moran (1998); Johnson, et al. (2000); Krug (1992); Larsen (1987); Leithwood and Jantzi (1999); Leithwood and Montgomery (1982, 1985); Levine and Lezotte (1990); Little (1982); Louis and Miles (1990); Madden, Lawson, and Sweet (1976); Newmann, King, and Rigdon (1997); Ogawa and Hart (1985); Pavan and Reid (1991, 1994); Peterson, Gok, and Warren (1995); Purkey and Smith (1983); Rosenholtz (1985, 1989a,b); Sammons, Hillman, and Mortimore (1995); Scheurich (1998); Schmitt (1990); Sheppard (1996); Terry (1996); Venezky and Winfield (1979); Weber (1971); Wendel, Hoke, and Joekel (1996)

3.2.3 Administrators and Other Leaders Continually Strive to Improve Instructional Effectiveness

Administrators and other leaders:

a. Expect that educational programs will be changed so that they work better; they are never complacent about student achievement.
b. Make certain all stakeholders understand that that pursuit of continuous improvement does not mean that past practices were bad. They communicate to all parties that "you don't have to be bad to get better."
c. Regard themselves and one another as responsible for students' academic performance.
d. Direct school improvement efforts at clearly defined student achievement and/or social behavior goals; they secure schoolwide and community understanding and agreement about the purpose of improvement efforts.
e. Work with staff and school-based management groups to develop improvement goals based on review of school performance data; the goals then drive planning and implementation.
f. Review programs and practices shown to be effective in other school settings for their potential in helping to meet school needs.
g. Give teachers latitude to experiment with innovations and determine what works best.
h. Specify clearly the roles and responsibilities for the various aspects of the school improvement effort.
i. Check implementation carefully and frequently, note and publicize progress, and modify activities to make things work better.
j. Secure and earmark resources to support improvement activities, acquire resources from many sources including the community, and make resource allocations based on instructional priorities.
k. Refine assessments, so that they measure, accurately and over time, what students know and can do.
l. Renew or redirect the improvement focus as goals are achieved, report and celebrate success, and work with staff to establish new goals.
m. Allow adequate time for innovations to become integrated into the life of the school, and provide ongoing support to the full staff during the implementation process.
n. Provide periodic events to acknowledge and celebrate successes and to renew interest and energy for continued school improvement work.

Key references Bamburg and Andrews (1989, 1991); Bartell (1990); Beck and Murphy (1996); Berman and McLaughlin (1979); Biester, et al. (1984); Bossert (1988b); Bossert, et al. (1982); Boyd (1992); Brookover (1979); Brundage (1979); Cawelti (1997); Ceperley (1999); Costello and Chapin (2000); David (1989); Deal and Peterson (1993); Education Commission of the States (1995); Edmonds (1979a,b); Emrick (1977); Everson, et al. (1986); Evertson (1986); Fullan (1992, 1993); Gall, et al. (1984); Good and Brophy (1986); Goodwin (2000); Hallinger and Hausman (1993); Hawley, et al. (1984); Hopkins (1999); Hord (1990, 1992a, 1997, 1998); Hord and Huling-Austin (1986); Johnson and Asera (1999); Langer (1999); Leithwood and Montgomery (1982); Levine (1990); Levine and Lezotte (1990); Little (1982, 1986); Louis and

King (1993); Louis and Miles (1990); Madden, Lawson, and Sweet (1976); McCallum (1999); Murphy and Hallinger (1993); Newmann, King, and Rigdon (1997); Oakes (1989); Pavan and Reid (1994); Purkey and Smith (1983); Rosenholtz (1985, 1989a,b); Rubenstein and Wodatch (2000); Scheurich, 1998; Schrag (1999); Snell (2000); Sparks (1983, 1986); Speck (1996); Stringfield and Teddlie (1988); Townsend (1997); Venezky and Winfield (1979); Weber (1971); Weller and Weller (1997, 1999); Wolf and White (2000)

3.2.4 Administrators and Other Leaders Engage Staff in Professional Development and Collegial Learning Activities

Administrators and other leaders:

a. Make resources—time, money, people, facilities, and materials—available to support ongoing programs of professional development for staff.
b. Offer some professional development activities during the regular work day.
c. Solicit and use staff input for the content of professional development activities and encourage them to assume leadership roles in planning and carrying out some of the activities.
d. Provide activities that enhance teachers' capabilities in the major areas of subject content, teaching strategies, reflective practice, application of research, collaborative skills, use of technology to support learning
e. Review research findings to identify effective staff development approaches for improving student performance.
f. Recognize that adults, like children, have different learning styles and provide diverse kinds of activities in response to these differences.
g. Arrange for staff involvement in group staff development activities at the building and district levels.
h. Make certain that skill-building activities are delivered over time, so that staff have the opportunity to practice their new learnings, report outcomes, and adjust strategies.
i. Build into staff development activities the opportunity for participants to share ideas and concerns regarding the use of new programs and practices.
j. Provide or arrange for ongoing technical assistance for school staff as they pursue school improvement activities.
k. Provide follow-up activities to ensure that newly acquired knowledge and skills are applied in the classroom.
l. Make resources available for staff to participate in individual professional development activities—university courses, professional conferences, out-of-district workshops, etc.—to enhance job-related knowledge and skills.
m. Create structures for staff members to learn from one another through peer observation/feedback and other collegial learning activities.
n. Work to establish a norm of collegiality—a professional learning community in which staff members will routinely learn and work together to improve the instructional program.

o. Evaluate the impact of professional development on teaching practice and student learning and use findings to guide the development of future professional development activities.

Key references Adey (1997); Agado and Ovando (1998); Bamburg and Andrews (1991); Beck and Murphy (1996); Bennett (1987); Block (1983); Boyd (1992); Boyd and Hord (1994); Butler (1989, 1992); Cawelti (1997); Corcoran (1985); daCosta (1995); David (1989); Deal and Peterson (1993); Eubanks and Levine (1983); Everson, et al. (1986); Evertson (1986); Fullan (1992, 1993); Gage (1984); Gall, et al. (1984); Gall and Renchler (1985); Harwell, et al. (2000); Hawley, et al. (1984); Hord (1997); Hord and Huling-Austin (1986); Hoy, Hannum, and Tschannen-Moran (1998); Joyce (1987); Joyce and Showers (1980, 1995); Joyce, et al. (1989); Kohler, Crilley, and Shearer (1997); Korinek, Schmid, and McAdams (1985); Langer (1999); Lee and Smith (1996); Levine, Levine, and Eubanks (1987); Levine and Lezotte (1990); Little (1982, 1986); Loucks-Horsley, et al. (1987); Louis and King (1993); Louis, Marks, and Kruse (1996); Louis and Miles (1990); March, et al. (1993); Murphy and Hallinger (1993); Newmann and Wehlage (1995); Oakes (1989); Peterson (1997); Rosenholtz (1985, 1989a,b); Rubenstein and Wodatch (2000); Sammons, Hillman, and Mortimore (1995); Slavin and Fashola (1998); Snell (2000); Sparks (1983, 1986); Sparks and Loucks-Horsley (1990); Speck (1996); Stevenson (1987); Wade (1984-85); Warren and Muth (1995); Weathersby and Harkreader (1999); WestEd (2000); Wohlstetter and Mohrman (1996)

3.3 District

3.3.1 District Leaders and Staff Encourage, Support, and Monitor School Improvement Efforts

District leaders and staff:

a. Provide both pressure for continuous school improvement and resources—time, money, materials, people, and facilities—to facilitate improvement.
b. Monitor both the implementation of improvement programs and the achievement and behavioral outcomes produced by these programs. Provide advice, clarification, technical feedback and support services.
c. Assure that resources are focused on the attainment of district goals and priorities and connected to findings from ongoing monitoring of student performance.
d. Work with schools to align curriculum to standards and assessments.
e. Engage parents in community members in development of district plans and keep them informed about program implementation and outcomes.

f. Delegate much of the responsibility for school improvement to principals and school site management groups, while at the same time providing guidance and support for school improvement efforts.
g. Acquaint site management groups with promising practices from inside and outside the district, encourage their use, and work with building staffs to implement practices selected.
h. Provide principals and school staffs ongoing programs of staff development focused on strengthening instructional and leadership skills; some district-sponsored activities should be held at school sites. Strongly encourage school personnel to pursue other professional development activities as well.
i. Do not accept the low performance of some schools as "inevitable." Rather they note and take action to address such problems.
j. Celebrate achievements and improvements, especially in previously low-performing schools.
k. Protect schools from political or economic turbulence which might disrupt classroom instruction.

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See also See 1.3.3—District Policies Supporting Excellence and Equity

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